

Appl. No. 10/629367

In the Claims:

Listing of all claims:

1                   1. (Currently Amended)     A stand alone welding  
2                   power supply comprising;  
3                   a primary mover mechanically coupled to a rotating  
4                   shaft;  
5                   a generator having a rotor mechanically coupled to  
6                   the shaft, and further having a stator magnetically  
7                   coupled to the rotor, whereby the generator provides a  
8                   generator output;  
9                   an inverter having an inverter input in electrical  
10                  communication with the generator output, wherein the  
11                  inverter inverts power from the inverter input to  
12                  provide an inverter output;  
13                  a controller coupled to the primary mover and  
14                  having a feedback input; and  
15                  a feedback circuit coupled to the welding inverter  
16                  output and the feedback input wherein a feedback signal  
17                  responsive to at least one welding inverter output  
18                  operating parameter is provided to the feedback input.

1                   2. (Original)     The power supply of claim 1  
2                   wherein the primary mover includes a speed control and the  
3                   controller includes an output coupled to the speed control,  
4                   wherein the speed of the primary mover is controlled in  
5                   response to the feedback signal.

1                   3. (Original)     The power supply of claim 2  
2                   wherein the speed control includes an idle/run selector for  
3                   selecting between an idle speed and a run speed in response  
4                   to the feedback signal.

Appl. No. 10/629367

1                   4. (Original)    The power supply of claim 1  
2    wherein the controller includes means for controlling at  
3    least one of a throttle position, a fuel pump, an injection  
4    timer, a fuel to air ratio, fuel consumption and ignition  
5    timing.

1                   5. (Currently Amended)    The power supply of  
2    claim 1 wherein the at least one operating parameter is  
3    welding an inverter current.

1                   6. (Currently Amended)    The power supply of  
2    claim 1 wherein the at least one operating parameter is  
3    welding an inverter voltage.

1                   7. (Currently Amended)    The power supply of  
2    claim 5 wherein the at least one operating parameter further  
3    includes welding an inverter voltage.

1                   8. (Original)    The power supply of claim 7  
2    wherein the feedback circuit includes a multiplier, wherein  
3    the multiplier multiplies signals representative of voltage  
4    and current to obtain a signal representative of power, and  
5    further wherein the feedback circuit includes an integrator  
6    to integrate the signal representative of power.

1                   9. (Original)    The power supply of claim 2  
2    further including a rectifier that couples the inverter to  
3    the ac output, and wherein the inverter includes at least  
4    one input energy storage device that stores rectified energy  
5    and wherein the controller causes the primary mover to  
6    increase speed when the energy stored decreases past a  
7    threshold.

Appl. No. 10/629367

1                   10. (Original) The power supply of claim 1  
2           wherein the operating parameter is a function of a ripple in  
3           the output.

1                   11. (Currently Amended) The power supply of  
2           claim 1 further including a rectifier coupled to the  
3           inverter output to provide a dc ~~welding~~ inverter output.

1                   12. (Original) The power supply of claim 1  
2           wherein the generator is a dc generator.

1                   13. (Currently Amended) The power supply of  
2           claim 1 wherein the generator is an ac ~~dc~~ generator, and the  
3           inverter ~~incudes~~ includes an input rectifier.

1                   14. (Currently Amended) A stand alone welding  
2           power supply comprising;  
3                   a primary mover mechanically coupled to a rotating  
4           shaft;  
5                   a generator having a rotor mechanically coupled to  
6           the shaft, and further having a stator magnetically  
7           coupled to the rotor, whereby the generator provides a  
8           generator output;  
9                   an inverter having an inverter input in electrical  
10           communication with the generator output, wherein the  
11           inverter inverts power from the inverter input to  
12           provide an inverter output;  
13                   control means, coupled to the primary mover and  
14           having a feedback input, for controlling the primary  
15           mover; and  
16                   feedback means, coupled to the welding inverter  
17           output and the feedback input, for providing a feedback

Appl. No. 10/629367

18 signal responsive to at least one welding inverter  
19 output operating parameter to the feedback input.

1 15. (Original) The power supply of claim 14  
2 wherein the primary mover speed control means for  
3 controlling the primary mover's speed, and the control means  
4 includes an output coupled to the speed control means,  
5 wherein the speed of the primary mover is controlled in  
6 response to the feedback signal.

1 16. (Original) The power supply of claim 15  
2 wherein the speed control means includes an idle/run  
3 selector means for selecting between an idle speed and a run  
4 speed in response to the feedback signal.

1 17. (Original) The power supply of claim 14  
2 wherein the control means includes means for controlling at  
3 least one of a throttle position, a fuel pump, an injection  
4 timer, a fuel to air ratio, fuel consumption and ignition  
5 timing.

1 18. (Currently Amended) The power supply of  
2 claim 14 wherein the at least one operating parameter is  
3 welding inverter current.

1 19. (Currently Amended) The power supply of  
2 claim 14 wherein the at least one operating parameter is  
3 welding inverter voltage.

20-39. (Cancelled.)

Appl. No. 10/629367

1                   40. (New) The power supply of claim 18 wherein the  
2                   at least one operating parameter further includes inverter  
3                   voltage.

1                   41. (New) The power supply of claim 40 wherein the  
2                   feedback means includes a multiplier means for multiplying  
3                   signals representative of voltage and current to obtain a  
4                   signal representative of power, and further wherein the  
5                   feedback means includes an integrator means for integrating  
6                   the signal representative of power.

1                   42. (New) The power supply of claim 15 wherein the  
2                   inverter includes at least one input energy storage means  
3                   for storing energy to be inverted by the inverter, and  
4                   wherein the control means further includes means for  
5                   increasing primary mover's speed when the energy stored  
6                   decreases past a threshold.

1                   43. (New) The power supply of claim 14 wherein the  
2                   operating parameter is a function of a ripple in the output.

1                   44. (New) The power supply of claim 14 further  
2                   including a rectifier means coupled to the inverter output  
3                   for providing a dc inverter output.

1                   45. (New) The power supply of claim 14 wherein the  
2                   generator is a dc generator.

1                   46. (New) The power supply of claim 14 wherein the  
2                   generator is an ac dc generator and the inverter includes a  
3                   rectifier.

Appl. No. 10/629367

1                   47. (New)       A method of providing power  
2                   comprising;  
3                   generating an electrical output with an engine and  
4                   generator;  
5                   inverting the electrical input to provide an ac  
6                   inverter output;  
7                   controlling the engine using feedback indicative  
8                   of an inverter output operating parameter.

1                   48. (New) The method of claim 47 wherein the  
2                   engine speed is controlled in response to the feedback.

1                   49. (New) The method of claim 48 wherein the step  
2                   of controlling includes the step of selecting between an  
3                   idle speed and a run speed in response to the feedback.

1                   50. (New) The method of claim 47 wherein the step  
2                   of controlling includes controlling at least one of a  
3                   throttle position, a fuel pump, an injection timer, a fuel  
4                   to air ratio, fuel consumption and ignition timing.

1                   51. (New) The method of claim 48 including the  
2                   step of providing feedback responsive to an inverter  
3                   current.

1                   52. (New) The method of claim 48 including the  
2                   step of providing feedback responsive to an inverter  
3                   voltage.

1                   53. (New) The method of claim 48 including the  
2                   step of providing feedback responsive to an inverter power.

Appl. No. 10/629367

1                   54. (New) The method of claim 43 wherein step of  
2 providing feedback further includes the steps of multiplying  
3 signals representative of voltage and current to obtain a  
4 signal representative of power, and integrating the signal  
5 representative of power.

1                   55. (New) The method of claim 58 further including  
2 the step of storing energy after rectification and wherein  
3 the step of controlling includes the step of increasing  
4 engine speed when the energy stored decreases past a  
5 threshold.

1                   56. (New) The method of claim 51 wherein the  
2 feedback is responsive to a ripple in the output.

1                   57. (New) The method of claim 51 further including  
2 the step of rectifying the inverter output to provide a dc  
3 inverter output.

1                   58. (New) The method of claim 47 wherein the step  
2 of generating includes the step of generating a dc output.

1                   59. (New) The method of claim 47 wherein the step  
2 of generating includes the step of generating an ac dc  
3 output and the step of inverting includes the step of  
4 rectifying.